

South Korea, UK aim for completion of public-safety LTE deployments next year

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SAN DIEGO—As [FirstNet](#) evaluates bids to build a nationwide public-safety broadband network in the United States, public-safety [LTE](#) deployments in South Korea and the United Kingdom (UK) are expected to be completed next year, according to speakers at last week's Public Safety Broadband Stakeholder Meeting conducted by [Public Safety Communications Research](#) (PSCR).

Jeong-ki Kim, South Korea's minister of public safety and security, announced that the pilot network for SafeNet—South Korea's public-safety LTE effort—is scheduled to be completed this month. Deployment of the nationwide SafeNet system is set to begin in October, with the project expected to be finished in December 2017.

Richard Hewlett, deputy director for the UK's Emergency Services Mobile Communications Programme (ESMCP), said that contracts for the emergency services network (ESN) have been signed with EE—the British commercial wireless carrier purchased in January by BT—for network services and with Motorola Solution for mission-critical systems integration and functionality.

“The ambition is to replace our existing national [TETRA](#) -based [network] with a better, more flexible, low-risk solution that keeps our users with the 21st

-century capabilities that they're asking for,” Hewlett said during his presentation last Thursday.

Indeed, when UK officials announced plans to have first responders migrate from analog VHF radio to the Airwave TETRA system, the notion was met with notable resistance from the British public-safety community, Hewlett said. That has not been the case with the LTE-based ESN, he said.

“This time, it's very different; they're saying, ‘Can we have it [public-safety LTE] earlier?’”

Hewlett said.

Unlike FirstNet, the UK system does not have dedicated public-safety spectrum. Instead, the 1-billion-pound system will leverage EE's commercial spectral assets in several bands, including 800 MHz, 1.8 GHz and 2.7 GHz.

"If you look at the combined spectrum that they've got, it's huge," Hewlett said during an interview with [IWCE](#)'s *Urgent Communications* after his presentation.

British first responders will have a separate PLMN ID from commercial users, so ESN traffic can be prioritized on a preemptive basis on the EE network, Hewlett said. In addition, UK officials would like to see greater use of 800 MHz spectrum for ESN traffic in rural areas, where better signal-propagation characteristics are beneficial.

Deployment of the ESN already has begun, Hewlett said.

"EE took a gamble and started building before we actually signed the contract," Hewlett said. "The reference systems are being built now, and they're both sitting on an Ericsson foundation. They're working, but they're not fully featured yet. We did our first test PTT [push-to-talk] call last week.

"What we need to do is probably spend a couple of months optimizing to play around with the parameters and figure out the best way to configure both the device spec and also the eNodeB spec to make sure that we got the optimized solution for capacity management."

Buildout of the 18,000-site ESN is scheduled to be finished in September 2017, when public-safety entities are expected to begin a 27-month transition from the Airwave [TETRA](#) network—a system that costs about 1 million pounds per day to use—to the [LTE](#)

-based platform. Current plans call for all British first responders to abandon the Airwave TETRA network in December 2019.

“The [Airwave] contract expires in December 2019, but we can extend it, if we need to—we’ve got that as a backup mechanism,” Hewlett said. “But we’re doing our best to try to make sure that we’ve got everybody off [of the Airwave system] by then.”

Despite the UK government’s considerable financial incentives to stop use of the Airwave TETRA network, first-responder entities will have crucial input into the transition timing, Hewlett said.

“We will go as fast as we can to get this built,” he said. “But, if the system isn’t ready, we don’t go live.”

In Canada, the government has allocated 10x10 MHz of 700 MHz spectrum—harmonized with [FirstNet](#)’s spectrum—for a public-safety broadband network, but many key details have not been determined yet, according to Joe Fournier of the Canadian Federal Government’s Center for Security Science (CSS). Canadian officials want their system to support [interoperability](#) with FirstNet, but key questions regarding the governance and business models to support the proposed public-safety broadband network (PSBN) still need to be addressed, he said.

“There are still a lot of decisions to be made,” Fournier said during his presentation. “We’re still in the process of defining our FirstNet.”

Fournier said he expects the Canadian public-safety LTE system to depend significantly on deployable solutions that can support first-responder communications in the vast rural areas of the country. In addition, a series of public-safety LTE demonstrations conducted along the U.S.-Canada border have provided clear indications that such a network would be very beneficial, he said.

“We now have an environment in Canada that is very serious about moving public-safety broadband forward,” Fournier said. “I won’t give any dates, but I will say there is an absolute, definite appetite by decision makers in Canada to start implementing our PSBN in very short

order after the first instances of FirstNet get implemented.”

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